Claims:

1. A collision prevention detector (22) to be mounted on a vehicle (10), transmitting a sequence of transmissions of IR signals, whereby the signals are transmitted in sequences alternating between at least one at the right and to the left positioned LED (26, 24, 36, 34), when both signals provide a return/reflected signal to an IR-receiver (39) an object (12) is determined as present within the area from the point where the transmitted signals intersect/cross, whereby the sequencing of signals makes it possible to position a return signal from an object (12), as one of the signals has to confirm the other signal to provide a warning signal, said detector (22) further comprising:

at least two sets of said LED's positioned to the right and to the left, whereby a first set detects objects in a near-field zone (40) of the vehicle, and a second set beyond said first field in a far-field zone (42);

a processor connected to said detection of near- and far-fields and being provided the vehicle speed; and

a comparator connected to or comprised in said processor, which compares the vehicle speed with a pre-determined loss of measured distance by measuring how fast said vehicle (10) approaches said object (12) by closing in from a far-field zone (42) to a near-field zone (40), whereby an alarm is given through an indicator device (38) mounted on said vehicle alerting a vehicle driver to pay attention to the closing in of an approaching object (12).

2. A detector (22) according to claim 1, wherein it can be used as a rear mirror mounted blind spot detector, a vehicle front mounted detector, a vehicle rear mounted detector, a vehicle side mounted detector, and a vehicle roof mounted detector.

3. A detector (22) according to claim 2, wherein the detector (22) is mounted within at least one of a headlight and a rear light of said vehicle (10).

4. A detector (22) according to any one of claims 1-3, wherein there are further sets of far-zone LED's detecting beyond said second far-zone LED's.

5. A detector (22) according to any one of claims 1-4, wherein said vehicle (10) is automatically braked controlled by said processor if an object (12) is closing in at a calculated breaking distance for the speed of the vehicle (10) regarding detectors (22) which are vehicle front mounted detectors, or vehicle rear mounted when reversing, thus detecting objects (12) when the vehicle closes in on objects in front of it and when it reverses.

6. A detector (22) according to claim 5, wherein said processor is connected to the vehicle road computer providing road temperatures.

7. A detector (22) according to any of claims 5-6, wherein said processor is connected to a rain sensor, antiskid system, anti-spin system and other like systems providing road condition information utilized to calculate when to brake said vehicle.

8. A detector (22) according to any one of claims 1-8, wherein the width of a search field zone is determined by the optics of the LED's utilized, through the sector angle within a beam of light and the angle between beams of light, and through the power of transmission of a transmitted IR signal.

9. A detector (22) according to any one of claims 1-3, wherein search field zones can be arranged so that warning signals are provided when a vehicle is entering a blind spot area, is within the area, and is leaving the area.

10. A detector according to any one of claims 1-9, wherein by sunshine a strong signal is utilized and during darkness a weaker signal, which provides that the signal strength is adapted to the external light conditions and dirt on said LED's through a receiver (30, 32).

11. A method for a collision prevention detector (22) to be mounted on a vehicle (10), transmitting a sequence of transmissions of IR signals, whereby the signals are transmitted in sequences alternating between at least one at the right and to the left positioned LED (26, 24, 36, 34), when both signals provide a return/reflected signal to IR-receiver an object (12) is determined as present within the area from the point where the transmitted signals intersect/cross, whereby the sequencing of signals makes it possible to position a return signal from an object, as one of the signals has to confirm the other signal to provide a warning signal, said detector performing the steps of:

a first set detecting objects in a near-field zone (40) of the vehicle (10), and a second set detecting objects beyond said first field in a far-field zone (42), whereby at least two sets of said LED's are positioned to the right and to the left;

a processor being provided the vehicle speed and connected to said detection of near- and far-fields; and

a comparator connected to or comprised in said processor comparing the vehicle speed with a pre-determined loss of measured distance by measuring how fast said vehicle (10) approaches said object (12) by closing in from a far-field zone (42) to a near-field zone (40), whereby an alarm is given through an indicator device (38) mounted on said vehicle (10) alerting a vehicle driver to pay attention to the closing in of an approaching object (12).

12. A method according to claim 11, wherein it can be used as a rear mirror mounted blind spot detector, a vehicle front mounted detector, a vehicle rear mounted detector, a vehicle side mounted detector, and a vehicle roof mounted detector.

13. A method according to anyone of claims 11-12, wherein the detector is mounted within at least one of a headlight and a rear light of said vehicle.

14. A method according to anyone of claims 11-13, wherein there are further sets of far-zone LED's detecting beyond said second far-zone LED's.

15. A method according to anyone of claims 11-14, wherein said vehicle is automatically braked controlled by said processor if an object is closing in at a calculated breaking distance for the speed of the vehicle regarding detectors which are vehicle front mounted detector, or vehicle rear mounted when reversing, thus detecting objects when the vehicle closes in on objects in front of it and when it reverses.

16. A method according to claim 15, wherein said processor is connected to the vehicle road computer providing road temperatures.

17. A method according to any of claims 15-16, wherein said processor is connected to a rain sensor, antiskid system, anti-spin system and other like systems providing road condition information utilized to calculate when to brake said vehicle.

18. A method according to anyone of claims 11-17, wherein the width of a search field zone is determined by the optics of the LED's utilized, through the sector angle within a beam of light and the angle between beams of light, and through the power of transmission of a transmitted IR signal.

19. A method according to any one of claims 11-18, wherein search field zones can be arranged so that warning signals are provided when a vehicle is entering a blind spot area, is within the area, and is leaving the area.

20. A method according to anyone of claims 11-19, wherein by sunshine a strong signal is utilized and during darkness a weaker signal, which provides that the signal strength is adapted to the external light conditions and dirt on said LED's.
